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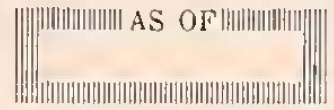
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CURRENT SNOW SURVEYS

# WATER SUPPLY OUTLOOK FOR COLORADO AND NEW MEXICO

and  
FEDERAL-STATE-PRIVATE COOPERATIVE SNOW SURVEYS



U.S. DEPARTMENT of AGRICULTURE \* SOIL CONSERVATION SERVICE

Collaborating with  
COLORADO STATE UNIVERSITY EXPERIMENT STATION  
STATE ENGINEER of COLORADO  
and STATE ENGINEER of NEW MEXICO

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SOIL CONSERVATION SERVICE  
SNOW SURVEY UNIT  
P.O. BOX 17107  
DENVER, COLORADO 80217

THIS WATER SUPPLY OUTLOOK REPORT IS OBVIOUSLY DIFFERENT THAN THE FORMAT YOU MAY HAVE BECOME ACCUSTOMED TO RECEIVING IN THE PAST. WE ARE CONDUCTING A TRIAL OF THIS TYPE BULLETIN FOR THIS YEAR. THE NEW FORMAT IS AN ATTEMPT ON OUR PART TO REDUCE SOME OF THE IN-HOUSE PERSONNEL TIME DEVOTED TO ASSEMBLING, HAND-STUFFING AND MAILING THE BULLETINS. WE NO LONGER WILL BE PUBLISHING AND DISTRIBUTING INDIVIDUAL WATERSHED REPORTS. INSTEAD, ALL INDIVIDUALS ON OUR MAILING LIST WILL RECEIVE A REPORT WHICH COVERS ALL WATERSHEDS.

PRINTING AND MAILING OF THE BULLETIN WILL BE HANDLED BY CONTRACT TO PRIVATE FIRMS WHO SPECIALIZE IN THIS TYPE OF SERVICE. ALL CONTENTS OF THE REPORT WILL CONTINUE TO BE THE RESPONSIBILITY OF THE SOIL CONSERVATION SERVICE. WE ARE ATTEMPTING TO ADHERE TO THE SAME TIMETABLE FOR DISTRIBUTION THAT WE HAVE KEPT BEFORE.


A NEW FEATURE HAS BEEN ADDED TO THE FORMAT. EACH WATERSHED NOW HAS A LINE GRAPH WHICH SHOWS THE RELATIONSHIP OF CURRENT SNOWPACK CONDITIONS COMPARED TO MAXIMUM AND MINIMUMS OF RECORD.


SINCE THIS REPORT IS MEANT TO BE A SERVICE TO THE WATER USER WE WOULD APPRECIATE RECEIVING YOUR COMMENTS ON THE FORMAT, CONTENT AND TIMELINESS OF THIS REPORT COMPARED TO WHAT WE PREVIOUSLY PROVIDED. YOUR COMMENTS WILL HELP US IN ASSESSING THE USEFULNESS AND PRACTICALITY OF THIS TYPE OF BULLETIN.

PLEASE ADDRESS YOUR COMMENTS TO:  
SNOW SURVEY UNIT  
SOIL CONSERVATION SERVICE  
P.O. BOX 17107  
DENVER, COLORADO 80217

## WATER SUPPLY CONDITIONS as of FEBRUARY 1, 1979

THE WATER SUPPLY OUTLOOK FOR THIS COMING SEASON IS GOOD TO EXCELLENT IN ALL DRAINAGES OF COLORADO AND NEW MEXICO. THE MONTHS OF DECEMBER AND JANUARY HAVE BROUGHT ABOVE NORMAL PRECIPITATION AND BELOW NORMAL TEMPERATURES TO BOTH STATES. STREAMFLOW FORECASTS ARE 10 TO 30 PERCENT ABOVE NORMAL IN THE NORTHERN HALF OF COLORADO AND 160 TO 180 PERCENT OF AVERAGE IN SOUTHWESTERN COLORADO. THE RIO GRANDE AND ITS TRIBUTARIES ARE FORECASTED TO FLOW 185 TO 200 PERCENT OF NORMAL.

 **COLORADO** -- JANUARY WEATHER WAS CHARACTERIZED BY A SERIES OF STORMS WHICH BROUGHT HEAVY PRECIPITATION TO SOUTHWESTERN COLORADO. THE MOUNTAIN SNOWPACK OF THE RIO GRANDE AND SAN JUAN BASINS EXCEEDS 200 PERCENT OF NORMAL. SOME SNOW COURSES MEASURED THE MAXIMUM OF RECORD SINCE 1936. OTHER AREAS OF THE STATE HAVE SNOWPACKS WHICH RANGE FROM 160 PERCENT OF AVERAGE IN THE GUNNISON BASIN TO ABOUT 130 PERCENT OF NORMAL IN THE COLORADO RIVER BASIN.

 **NEW MEXICO** -- HEAVY SNOWS IN JANUARY HAVE BOLSTERED THE MOUNTAIN SNOWPACK TO IN EXCESS OF 200 PERCENT OF NORMAL FOR THE RIO GRANDE AND ITS TRIBUTARIES. OVER HALF OF THE SNOW COURSES MEASURED WERE THE MAXIMUM OF RECORD FOR THIS DATE. SEVERAL SNOW COURSES EXCEEDED 300 PERCENT OF NORMAL. THESE FIGURES MEAN AN EXCELLENT WATER SUPPLY CAN BE EXPECTED FOR NEXT SEASON'S IRRIGATION. STREAMFLOWS ARE FORECAST TO BE IN THE RANGE OF 180 TO 210 PERCENT OF NORMAL.



The map on this page indicates the most probable water supply as of the date of this report. Estimates assume average conditions of snow fall, precipitation and other factors from this date to the end of the forecast period. As the season progresses accuracy of estimates improve. In addition to expected streamflow, reservoir storage, soil moisture in irrigated areas, and other factors are considered in estimating water supply. Estimates apply to irrigated areas along the main streams and may not indicate conditions on small tributaries.

"The Conservation of Water begins with the Snow Survey"





# GUNNISON RIVER WATERSHED IN COLORADO



## YOUR WATER SUPPLY

SNOWPACK IN THE GUNNISON RIVER AREA IS EXCELLENT WITH 161 PERCENT OF NORMAL. WATER SUPPLIES SHOULD BE GOOD TO EXCELLENT IN ALL AREAS OF THE WATERSHED. THE LOWER ELEVATIONS SHOW THE GREATEST INCREASES IN SNOWPACK WITH MANY SITES HAVING RECORD AND NEAR RECORD ACCUMULATIONS. RESERVOIR STORAGE IS NEAR AVERAGE TO SLIGHTLY ABOVE AVERAGE. SOIL MOISTURE CONDITIONS IN THE BASIN ARE GENERALLY GOOD. NEAR AVERAGE WEATHER CONDITIONS AND A GOOD SNOWPACK COVERING MOST CROPLAND SHOULD HELP MAINTAIN SOIL MOISTURE AT ITS CURRENT LEVEL.

## STREAMFLOW FORECASTS (1000 Ac. Ft.) April - September

FORECAST POINT	Forecast	% of Average	1963-77 Average
Gunnison River inflow to Blue Mesa Reservoir (1)			754.0
Gunnison River near Grand Junction (2)			1130.0
North Fork of Gunnison (3)	370	141	261.0
Surface Creek near Cedaredge	22	145	15.2
Uncompahgre River at Colona	180	140	129.0

(1) Observed flow plus change in storage in Taylor Reservoir. (2) Observed flow plus change in storage in Blue Mesa, Wapiti Point and Taylor Reservoirs. (3) Observed flow plus change in storage in Taylor Reservoir.

## WATER SUPPLY OUTLOOK

STREAM OR AREA	Spring Season	Late Season
Ohio Creek	Exc.	Exc.
Slate River	Exc.	Exc.
Taylor River	Exc.	Exc.
Tomichi Creek	Exc.	Exc.

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

Basin or Stream and Reservoir	Usable Capacity	This Year	Last Year	1963-77 Average
Blue Mesa	830	518	239	417
Morrow Point	121	114	114	97
Taylor	106	61	34	63

## LIST OF COOPERATORS

The following organizations cooperate in snow surveys for the Colorado, Plateau, Arkansas and Rio Grande watersheds. Many other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

### STATE

Colorado State Engineer  
Colorado State Soil Conservation Board  
New Mexico State Engineer  
Colorado State University Experiment Station  
Rocky Mountain Forest and Range Experiment Station  
New Mexico Dept. of Game and Fish

### FEDERAL

Department of Agriculture  
Forest Service  
Soil Conservation Service  
Department of Interior  
Bureau of Reclamation  
Geological Survey  
National Park Service  
Department of Commerce  
NOAA, National Weather Service  
Defense Department  
Army Engineer Corps  
National Aeronautics and Space Administration  
Goddard Space Flight Center

### INVESTOR OWNED UTILITIES

Colorado Public Service Company  
Public Service Company of New Mexico

### MUNICIPALITIES

City of Denver  
City of Boulder  
City of Greeley  
City of Fort Collins

## SUMMARY of SNOW MEASUREMENTS

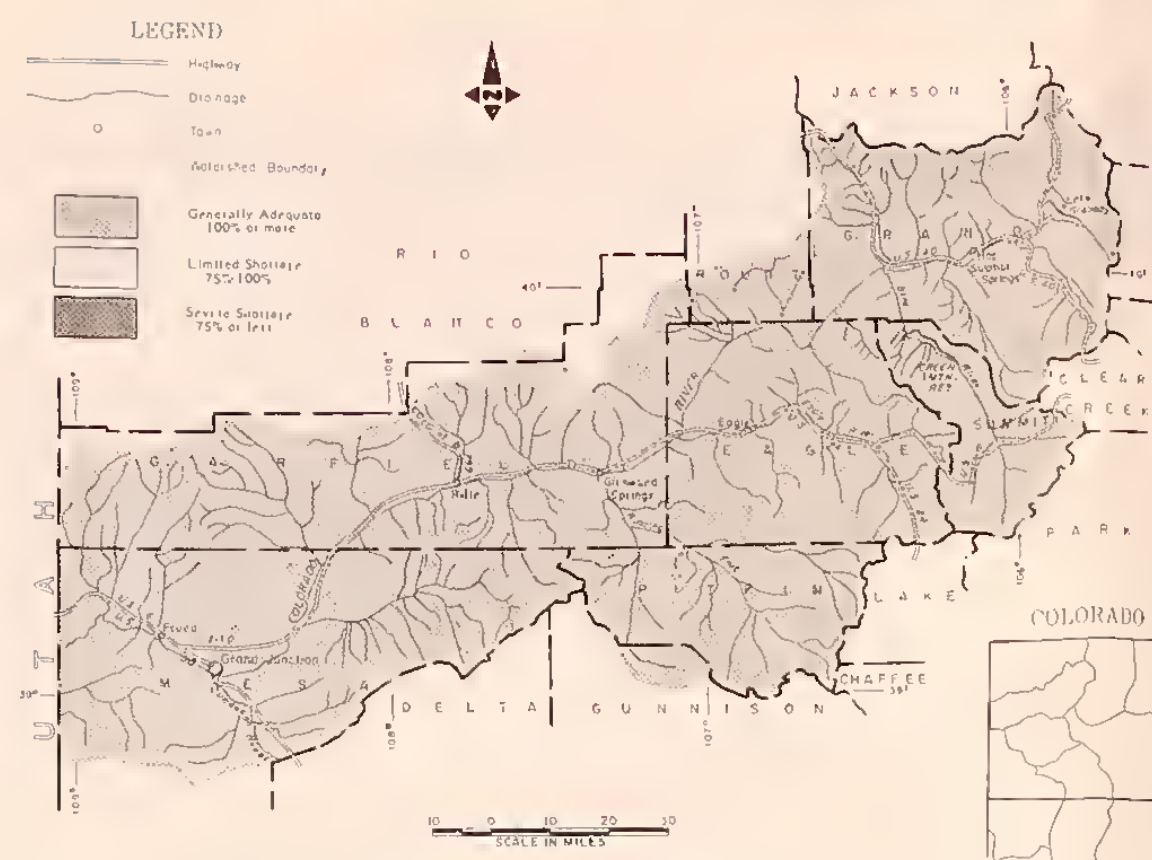
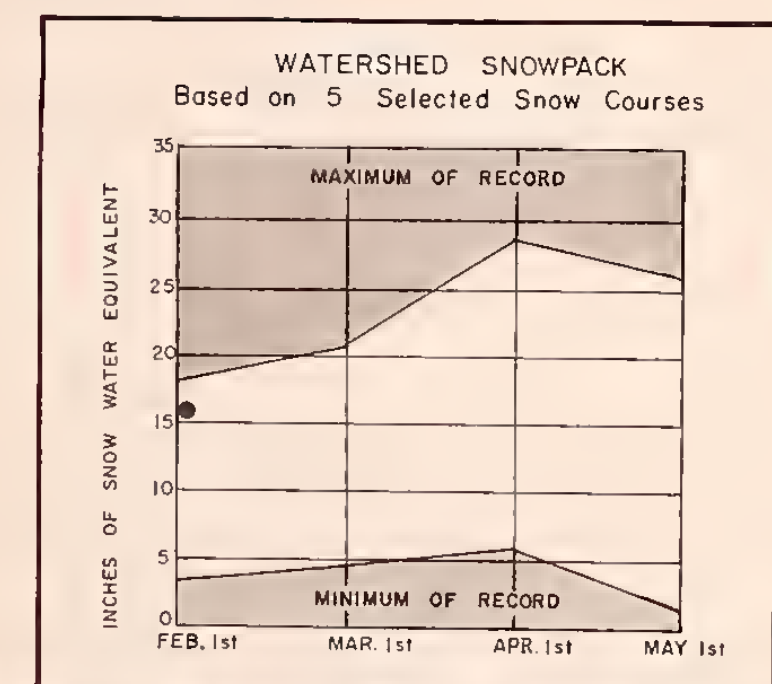
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN or SUB-WATERSHED	Number of Courses Measured	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	1963-77 Average
Gunnison	12	129	166
Surface Creek	3	121	154
Uncompahgre	3	114	152

## SNOW COURSE MEASUREMENTS

SNOW COURSE	DATE OF SURVEY	SNOW DEPTH (INCHES)	CURRENT INFORMATION		PAST RECORD	
			WATER CONTENT (INCHES)	LAST YEAR	1963-77 AVE.	
GUNNISON BASIN						
<u>Gunnison River</u>						
Alexander Lake	1/30	68	19.3	16.4	12.8	
Blue Mesa	Not scheduled					
Butte	1/31	60	17.8	12.2	9.8	
Cochetopa Pass (B)	1/26	32	7.3	4.2	3.6	
Crested Butte	1/29	59	16.5	12.4	8.3	
Keystone	1/30	75	23.5	18.6	12.7	
Lake City	1/25	40	9.3	6.2	5.0	
Mesa Lakes (B)	1/31	56	16.5	12.8	10.2	
McClure Pass #1	1/26	56	15.3	10.2	10.6	
Park Cone	1/30	42	10.4	7.9	6.3	
Park Reservoir	1/29	76	22.0	18.7	14.5	
Porphyry Creek	1/30	58	17.0	14.1	10.3	
Tomichi	1/30	45	11.9	11.3	8.6	
<u>Surface Creek</u>						
Alexander Lake	1/30	68	19.3	16.4	12.8	
Mesa Lakes	1/31	56	16.5	12.8	10.2	
Park Reservoir	1/29	76	22.0	18.7	14.5	
<u>Uncompahgre River</u>						
Ironton Park	1/30	48	13.4	13.0	9.0	
Red Mountain Pass	1/29	97	27.2	23.0	18.9	
Telluride (B)	1/30	39	9.8	8.2	5.3	

75-No survey.  
(B)-On adjacent drainage.



## YOUR WATER SUPPLY

THE SNOWPACK IN THE COLORADO RIVER BASIN IS 134 PERCENT OF NORMAL WHICH SHOULD MEAN GOOD WATER SUPPLIES. RESERVOIR STORAGE IN MOST RESERVOIRS IS AVERAGE TO NEAR AVERAGE. GRANBY RESERVOIR IS THE ONLY EXCEPTION WITH ONLY 50 PERCENT OF THE 1963-77 AVERAGE. THIS IS MAINLY A RESULT OF THE DROUGHT OF TWO YEARS AGO AND SHOULD BE ALLEVIATED SOMEWHAT BY STREAMFLOWS WHICH ARE EXPECTED TO BE 30 PERCENT ABOVE NORMAL THIS SPRING. FAIR TO GOOD SOIL MOISTURE EXISTS IN MOST OF THE COLORADO RIVER AREA.

## STREAMFLOW FORECASTS (1000 Ac. Ft.) April - September

FORECAST POINT	Forecast	% of Average	1963-77 Average
Blue River inflow to Dillon Reservoir	190	114	167.0
Blue River inflow to Green Mountain Reservoir (1)	330	115	287.0
Colorado River near Cameo (2)			2376.0
Colorado River near Dotsero (3)	1800	128	1422.0
Colorado River inflow to Granby Reservoir (4)	275	126	218.0
Roaring Fork at Glenwood Springs (5)	900	129	697.0
Williams Fork near Marshall (6)	60	101	59.0
Willow Creek inflow to Willow Creek Reservoir	62	130	48.0
Eagle River below Gypsum			

(1) Observed flow plus change in storage in Dillon Reservoir. (2) Observed flow plus change in storage in Green Mountain Reservoir. (3) Observed flow plus change in storage in Dillon Reservoir. (4) Observed flow plus change in storage in Granby Reservoir. (5) Observed flow plus change in storage in Glenwood Springs Reservoir. (6) Observed flow plus change in storage in Marshall Reservoir. (7) Observed flow plus change in storage in Willow Creek Reservoir. (8) Observed flow plus change in storage in Willow Creek Reservoir.

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

Basin or Stream and Reservoir	Usable Capacity	This Year	Last Year	1963-77 Average
Dillon	251	170	122	202
Granby	466	132	75	264
Green Mountain	139	73	51	76
Homestake	43	0	0	21
Ruedi	101	80	80	69
Vega	32	10	1	11
Williams Fork	97	44	27	42
Willow Creek	9	6	7	6

## WATER SUPPLY OUTLOOK

STREAM OR AREA	Spring Season	Late Season
Brush	Exc.	Avg.
Gypsum Creek	Exc.	Avg.



## SUMMARY of SNOW MEASUREMENTS

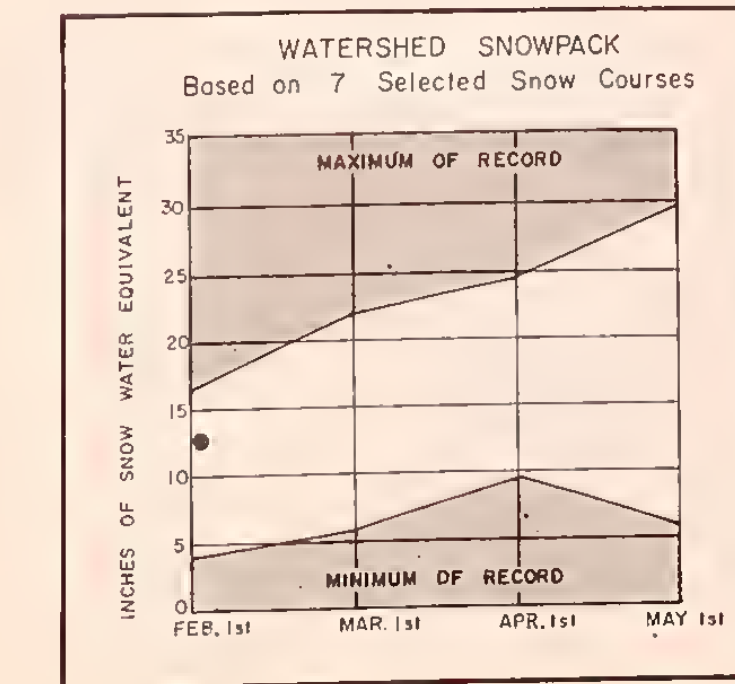
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN or SUB-WATERSHED	Number of Courses Measured	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	1963-77 Average
Blue River	7	79	118
Colorado	19	87	131
Plateau	3	122	154
Roaring Fork	8	111	142
Williams Fork	3	69	105
Willow	2	110	150

## SNOW COURSE MEASUREMENTS

SNOW COURSE	DATE OF SURVEY	SNOW DEPTH (INCHES)	CURRENT INFORMATION		PAST RECORD	
			WATER CONTENT (INCHES)	LAST YEAR	1963-77 Average	
COLORADO BASIN						
<u>Blue River</u>						
Blue River	1/29	27	5.6	7.3	5.2	
Fremont Pass	1/29	41	10.8	15.3	9.6	
Frisco Pass	1/25	27	5.6	--	--	
Grizzly Peak	1/26	45	11.2	17.0	10.6	
Hoosier Pass (B)	1/29	37	9.5	10.2	7.7	
Shrine Pass	1/29	47	12.8	15.0	10.3	
Snake River	1/25	29	6.7	8.2	5.3	
Summit Ranch	1/29	28	6.5	6.6	4.8	
<u>Colorado River</u>						
Arrow	1/29	42	11.3	10.7	8.1	
Berthoud Pass	1/26	43	12.5	13.2	9.2	
Berthoud Summit	1/29	49	13.6	17.3	11.2	
Cooper Hill	1/30	39	9.3	10.6	6.9	
Copper Mountain	1/25	41	9.0	14.0	--	
Fiddler Gulch	Discontinued					
Glenmar Ranch	1/30	26	5.2	7.6	5.4	
Gore Pass	1/29	39	9.7	11.4	6.5	
Grand Lake	1/26	37	9.2	8.8	5.2	
Lake Irene	1/27	58	17.1	21.0	13.2	
Lapland	1/30	27	6.2	8.9	6.3	
Lulu	Not scheduled					
Lynx Pass	1/29	38	8.9	12.6	7.5	
McKenzie Gulch	1/29	28	5.4	4.0	4.1	
Middle Fork	1/30	28	5.8	8.8	6.0	
Milner	1/27	44	11.7	14.0	8.8	
North Inlet	1/29	33	8.2	9.3	5.5	
Pando	1/29	32	7.8	8.1	6.0	
Phantom Valley	1/26	38	10.0	11.4	6.4	
Ranch Creek	1/26	34	8.6	7.6	5.9	
Tennessee Pass (B)	1/29	40	9.0	9.2	6.3	
Tourtelotte Park	Discontinued					
Vail Mountain	1/29	61	17.8	19.0	--	
Vasquez	1/30	36	8.8	10.4	7.6	
<u>Plateau Creek</u>						
Mesa Lakes	1/31	56	16.5	12.8	10.2	
Park Reservoir	1/29	76	22.0	18.7	14.5	
Trickle Divide	1/29	77	23.5	19.3	15.5	
<u>Roaring Fork</u>						
Aspen	1/26	53	15.2	15.1	10.1	
Independence Pass	1/31	49	14.7	12.7	9.3	
Ivanhoe	1/25	55	13.6	14.0	10.6	
Kilm	1/25	40	9.4	9.1	7.8	
Lift	1/26	42	12.3	14.4	10.1	
McClure Pass	1/26	56	15.3	10.2	10.6	
Nast	1/25	33	7.6	6.9	4.3	
North Lost Trail	1/26	57	15.2	10.4	10.2	
<u>Williams Fork River</u>						
Glenmar Ranch	1/30	26	5.2	7.6	5.4	
Jones Pass	1/26	38	10.1	14.2	8.7	
Middle Fork	1/30	28	5.8	8.8	6.0	
<u>Willow Creek</u>						
Granby	1/30	34	8.2	7.4	4.9	
Willow Creek Pass	1/26	45	10.8	9.9	7.8	

75-No survey.  
(B)-On adjacent drainage.

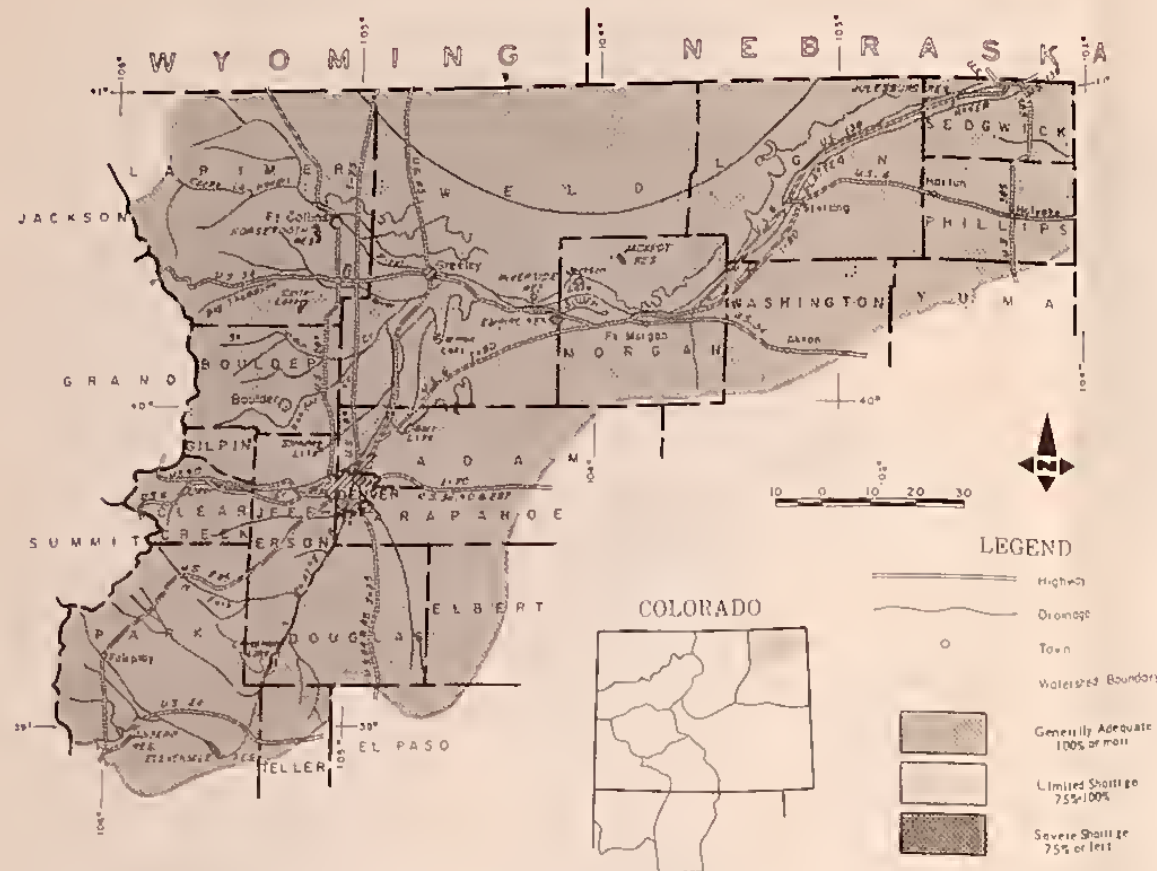








SOUTH PLATTE RIVER WATERSHED IN COLORADO



YOUR WATER SUPPLY

ABOVE AVERAGE PRECIPITATION IN JANUARY HAS IMPROVED THE PROSPECTS FOR A GOOD WATER SUPPLY NEXT SEASON ON ALL STREAMS. SNOWPACK MEASUREMENTS SHOW AN EXCELLENT SNOWPACK AT LOW AND MID-ELEVATIONS WITH A SLIGHTLY ABOVE AVERAGE SNOWPACK AT HIGH ELEVATIONS. SPRING AND SUMMER RUNOFF SHOULD BE 10 TO 30 PERCENT ABOVE NORMAL. SOIL MOISTURE IS RATED AT FAIR. RESERVOIR STORAGE IS 90 PERCENT OF NORMAL FOR THIS TIME OF YEAR.

STREAMFLOW FORECASTS (1000 Ac. Ft.) April - September

FORECAST POINT	Forecast	% of Average	1963-77 Average
Big Thompson River at Drake (1)	125	122	102.0
Boulder Creek at Orodell	55	122	45.1
Cache La Poudre River at Canyon Mouth (2)	280	115	243.0
Clear Creek at Golden (3)	130	108	120.0
St. Vrain Creek at Lyons (4)	95	133	71.6

(1) Observed flow plus changes in past plants. (2) Observed flow minus basin diversions plus municipal and irrigation diversions. (3) Observed flow minus diversions through August 15, 1963. (4) Observed flow plus changes in storage in Pine Reservoir.

WATER SUPPLY OUTLOOK

STREAM or AREA	Flow Period	Spring Season	Summer Season
Bear Creek	Avg	Fair	Fair
Coal Creek	Avg	Fair	Fair
North Fork of South Platte	Exc	Avg	Avg
North Fork of Cache La Poudre	Exc	Avg	Avg
Ralston Creek	Avg	Fair	Fair
Rock Creek	Avg	Fair	Fair
South Platte from Greeley to Fort Morgan	Avg	Fair	Fair
South Platte from Fort Morgan to Sterling	Avg	Fair	Fair
South Platte below Sterling	Avg	Fair	Fair

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	1963-77 Average	1963-77 Actual
Antero	16	14	14
Barr Lake	32	13	14
Black Hollow	8	3	4
Boyd Lake	44	37	37
Cache La Poudre	10	7	7
Carter Lake	109	90	81
Chambers Lake	9	4	3
Cheesman	79	37	28
Cobb Lake	34	4	0
Eleven Mile	98	91	82
Empire	38	15	14
Fossil Creek	12	5	7
Gross	43	19	22
Halligan	6	3	3
Horsetooth	144	75	29
Jackson	35	21	29
Julesburg	28	17	20
Lake Loveland	14	8	9
Lone Tree	9	1	6
Mariano	5	4	5
Marshall	10	3	4
Marston	17	15	15
Milton	24	8	10
Point of Rocks	70	54	47
Prewitt	33	22	11
Riverside	58	31	28
Standley	42	27	19
Terry	8	5	6
Union	13	11	9
Windsor	19	9	6

SUMMARY of SNOW MEASUREMENTS

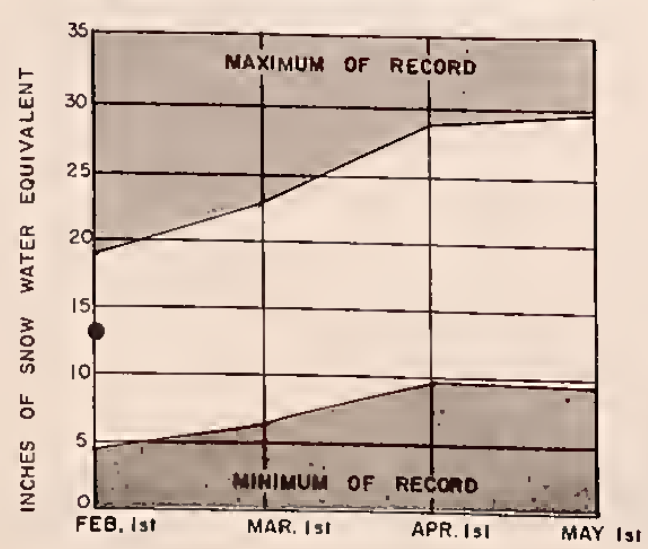
RIVER BASIN and SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	1963-77 Average
Big Thompson	5	93	156
Boulder	3	82	132
Cache La Poudre	8	87	123
Clear Creek	5	73	110
Saint Vrain	3	104	180
South Platte	7	112	140

SNOW COURSE MEASUREMENTS

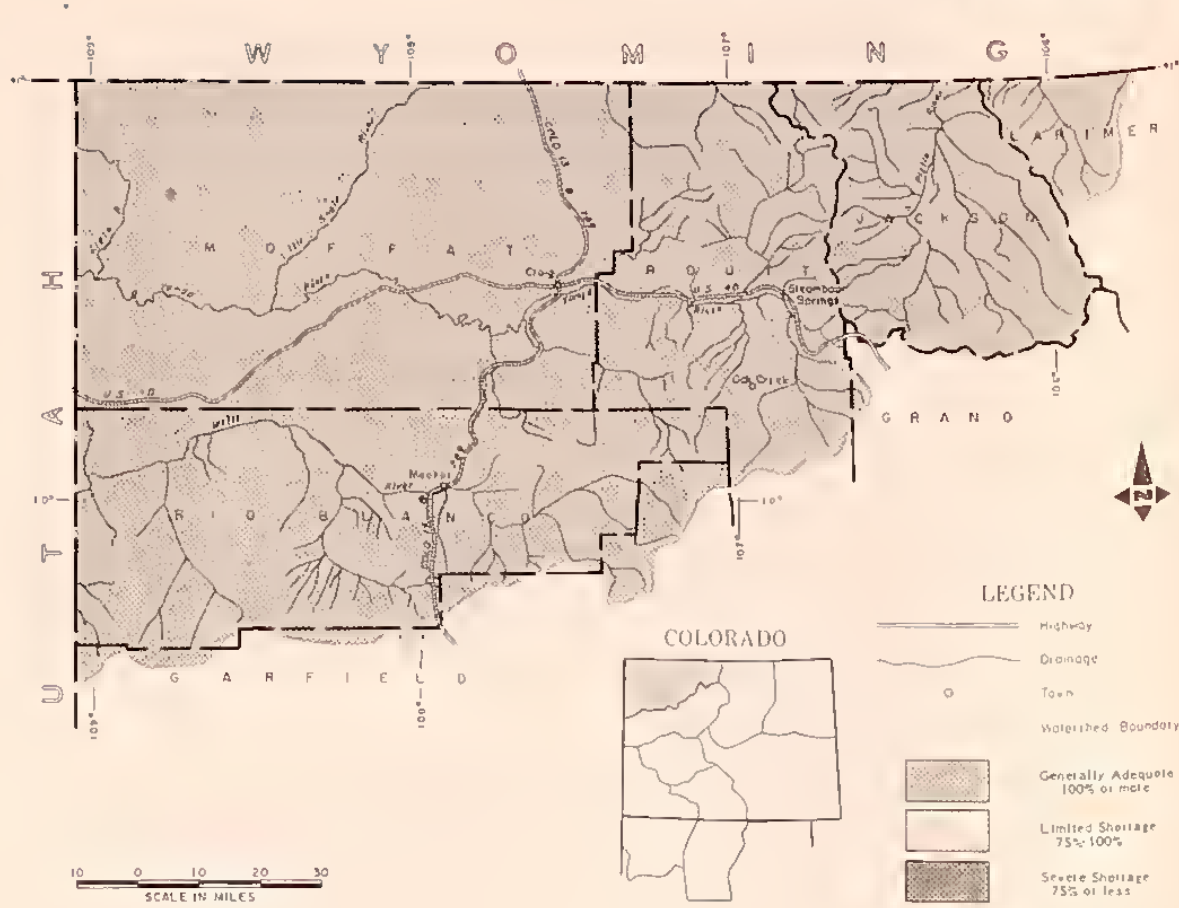
SNOW COURSE	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	PAST RECORD
SOUTH PLATTE BASIN				
Boulder Creek				
Baltimore	1/29	18	3.8	5.8 4.2
Boulder Falls	1/31	38	10.6	11.8 7.2
Lake Eldora	1/29	32	8.2	11.8 --
University Camp	1/31	46	13.8	17.0 9.9
Big Thompson River				
Bear Lake	1/31	51	15.0	-- --
Deer Ridge	1/30	21	5.2	5.2 2.9
Hidden Valley	2/02	39	8.7	10.4 5.9
Lake Irene (B)	1/27	58	17.1	21.0 13.2
Long's Peak	1/29	41	11.5	11.0 5.9
Two Mile	2/02	50	13.8	13.0 8.3
Willow Park	1/25	54	14.8	18.2 --
Cache La Poudre				
Bennett Creek	1/31	31	6.5	5.4 4.8
Big South	1/28	13	2.8	2.3 1.2
Cameron Pass	1/28	56	18.2	23.9 17.8
Chambers Lake	1/28	32	9.3	10.9 5.9
Deadman Hill	1/28	43	12.2	12.2 9.9
Hourglass Lake	Not scheduled		6.6	4.0
Joe Wright	1/28	55	16.6	21.0 15.3
Lost Lake	1/28	39	10.8	11.9 7.5
Red Feather	1/28	20	5.1	5.9 4.0
Clear Creek				
Baltimore (B)	1/29	18	3.8	5.8 4.2
Berthoud Falls	1/29	39	10.0	12.0 8.5
Empire	1/29	24	5.4	5.5 4.2
Grizzly Peak (B)	1/26	45	11.2	17.0 10.6
Loveland Lift	Discontinued		--	--
Loveland Pass	1/26	39	10.1	15.0 9.3
St. Vrain River				
Copeland Lake	1/26	27	6.2	5.1 2.7
Ward	1/29	22	5.6	5.0 3.3
Wild Basin	1/26	43	11.2	11.9 6.8
South Platte River				
Bison Reservoir	1/29	19	2.4	1.5 --
Como	2/01	26	6.7	4.9 4.4
Geneva Park	1/28	18	3.4	2.8 2.7
Horseshoe Mountain	1/30	38	9.2	8.9 6.4
Hoosier Pass	1/29	37	9.5	10.2 7.7
Jefferson Creek	2/01	31	7.6	7.8 5.7
Mosquito	1/30	37	9.0	9.5 6.3
Trout Creek Pass	1/31	28	6.0	1.7 3.5

(15) No survey. (16) On adjacent drainage.

WATERSHED SNOWPACK Based on 5 Selected Snow Courses



YAMPA, WHITE AND NORTH PLATTE RIVER WATERSHEDS IN COLORADO



YOUR WATER SUPPLY

WATER SUPPLIES IN THE NORTHWEST CORNER OF COLORADO SHOULD BE FAIR TO GOOD DUE TO A 129 PERCENT OF NORMAL SNOWPACK. STREAMS SHOULD FLOW AT ABOUT 20 PERCENT ABOVE NORMAL IF AVERAGE PRECIPITATION IS RECEIVED FOR THE REMAINDER OF THE YEAR. COLDER THAN NORMAL TEMPERATURES HAVE HELPED MAINTAIN SNOWCOVER AT LOW ELEVATIONS. AS A RESULT SOIL MOISTURE CONDITIONS, GENERALLY RATED AT FAIR, SHOULD BE MAINTAINED.

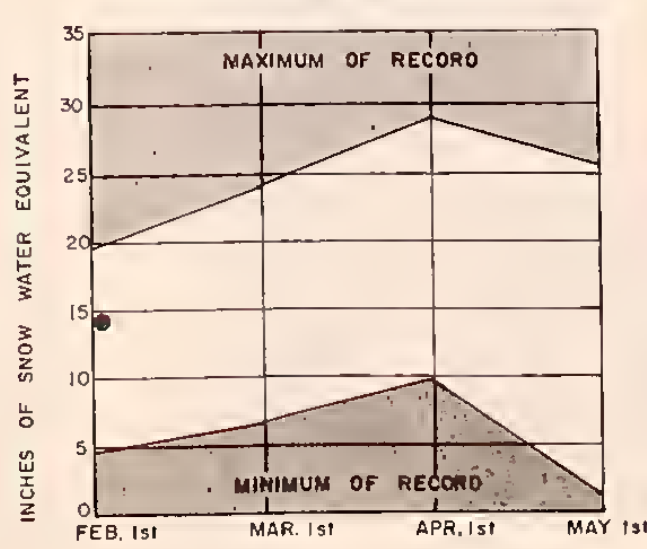
STREAMFLOW FORECASTS (1000 Ac. Ft.) April - September

FORECAST POINT	Forecast	% of Average	1963-77 Average
Elk River at Clark	240	121	198.0
Laramie River near Woods	140	112	125.0
Little Snake River at Lily	440	126	349.0
North Platte River at Northgate	300	126	238.0
White River near Meeker	340	118	287.0
Yampa River near Maybell	1100	122	905.0
Yampa River at Steamboat Springs	330	121	273.0

WATER SUPPLY OUTLOOK

STREAM or AREA	Flow Period	Spring Season	Summer Season
Canadian River	Avg.	Fair	Fair
Hunt Creek	Exc.	Avg.	Avg.
Illinois River	Avg.	Fair	Fair
Michigan River	Avg.	Fair	Fair
Oak Creek	Exc.	Avg.	Avg.
Trout Creek	Exc.	Avg.	Avg.

WATERSHED SNOWPACK Based on 5 Selected Snow Courses



SUMMARY of SNOW MEASUREMENTS

RIVER BASIN and SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	1963-77 Average
Elk	2	84	128
Laramie	2	101	131
North Platte	5	85	120
White	2	84	121
Yampa	6	76	129

SNOW COURSE MEASUREMENTS

SNOW COURSE	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	PAST RECORD
NORTH PLATTE BASIN				
Laramie River				
Deadman Hill	1/28	43	12.2	12.2 9.9
McIntyre	Not scheduled		--	--
Roach	1/28	55	15.8	15.5 11.5
North Platte River				
Cameron Pass	1/28	56	18.2	23.9 17.8
Columbine Lodge	1/26	67	19.4	26.5 14.5
Northgate	1/26	20	4.0	4.2 4.0
Park View	1/26	36	7.5	6.3 6.0
Willow Cr. Pass (B)	1/26	45	10.8	9.9 7.8
YAMPA BASIN				
Elk River				
Elk River	1/25	55	14.6	17.9 11.6
Hahn's Peak	1/25	49	13.0	14.8 10.0
White River				
Burro Mountain	1/29	47	12.5	15.6 11.1
Rio Blanco	1/30	44	11.9	13.5 9.2
Yampa River				
Bear River	Not scheduled		--	--
Columbine (B)	1/26	67	19.4	26.5 14.5
Croshaw	Not scheduled		--	--
Dry Lake	1/29	61	17.6	20.9 11.5
Lynx Pass (B)	1/29	38	8.9	12.6 7.5
Rabbit Ears	1/26	69	18.3	24.8 15.8
Tower	1/29	117	39.1	54.2 30.0
Yampa View	1/25	48	12.2	13.9 10.2

(15) No survey. (16) On adjacent drainage.

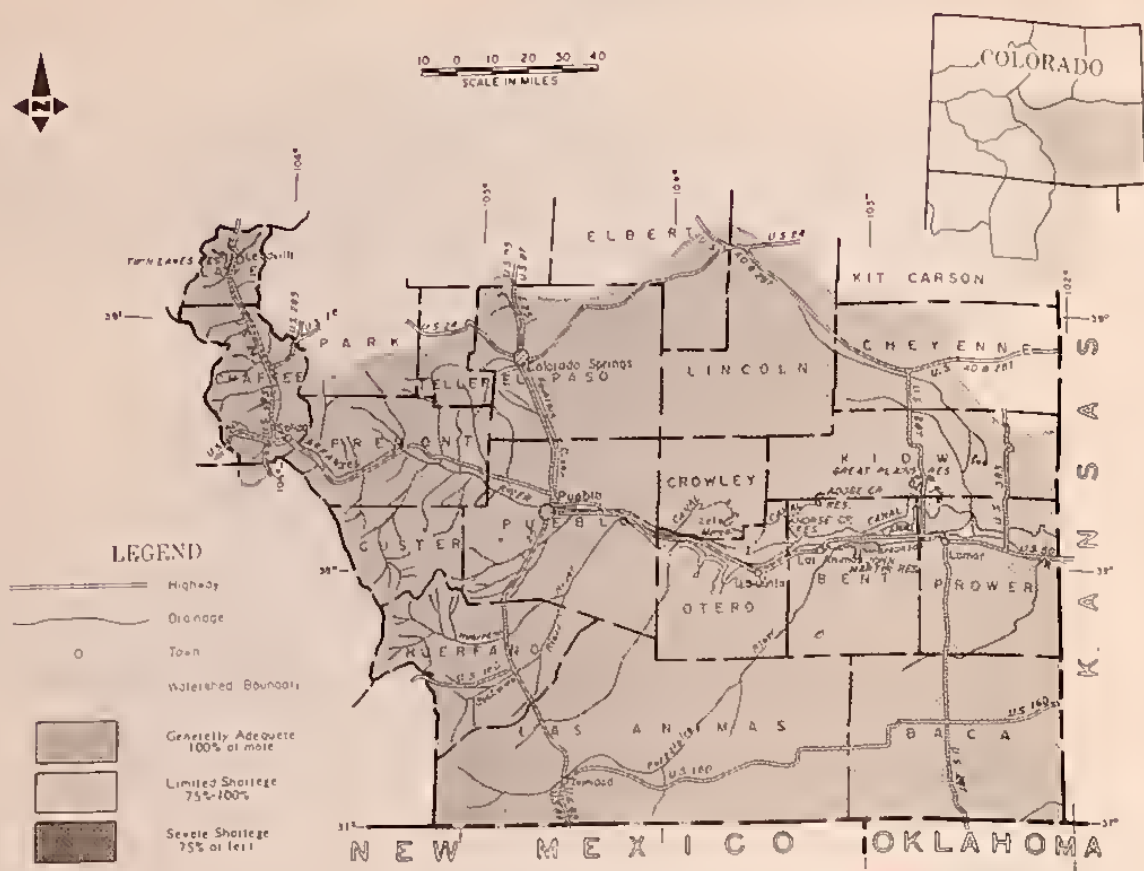








ARKANSAS RIVER WATERSHED IN COLORADO



YOUR WATER SUPPLY

THE ARKANSAS RIVER SHOULD EXPERIENCE A GOOD TO EXCELLENT WATER SUPPLY WITH SNOW ACCUMULATIONS AT 154 PERCENT OF NORMAL. RESERVOIR STORAGE IN THE BASIN IS IMPROVING BUT THE RESULTS OF THE DROUGHT OF TWO YEARS AGO ARE STILL OBVIOUS. SOME RESERVOIRS ARE APPROACHING AVERAGE STORAGE LEVELS BUT MOST ARE WELL BELOW AVERAGE. SOIL MOISTURE CONDITIONS ARE FAIR TO GOOD IN MOST AREAS WITH THE EXCEPTION OF ROCKY FORD, ORDWAY, AND TRINIDAD WHERE SOIL MOISTURE IS MOSTLY POOR TO FAIR.

STREAMFLOW FORECASTS (1000 Ac. Ft.) April - September

FORECAST POINT	Forecast	% of Average	1963-77 Average
Arkansas River near Pueblo (1)	365	140	260.0
Arkansas River at Salida (2)	380	132	288.0
Cucharas River near La Veta	11	121	9.1
Huerfano River near Redwing	20	149	13.4
Purgatoire River at Trinidad (3)	40	122	32.8

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

Basin or Stream and or RESERVOIR	Usable Capacity	This Year	Last Year	1963-77 Average
Adobe	62	0	0	12
Clear Creek	11	1	4	7
Cucharas	40	0	0	1
Great Plains	150	0	0	33
Horse Creek	27	0	0	5
John Martin	621	3	3	52
Meredith	42	0	0	10
Model	15	0	1	1
Pueblo	351	29	2	-
Turquoise	121	61	48	30
Twin Lakes	58	16	24	26

WATER SUPPLY OUTLOOK

STREAM or AREA	Spring Season	Little Season
Apishapa River	Exc.	Avg.
Fountain Creek	Exc.	Avg.
Grape Creek	Exc.	Avg.
Hardscrabble Creek	Exc.	Avg.
Monument Creek	Exc.	Avg.

SUMMARY of SNOW MEASUREMENTS

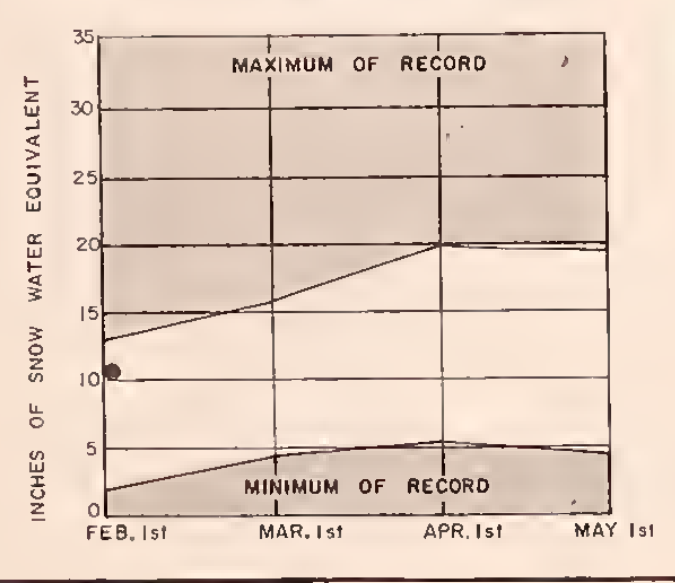
RIVER BASIN and or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	1963-77 Average
Arkansas	11	122	157
Cucharas	2	190	150
Purgatoire	1	151	108

SNOW COURSE MEASUREMENTS

SNOW COURSE	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (INCHES) LAST YEAR	WATER CONTENT (INCHES) AVG. 1963-77
ARKANSAS BASIN					
Arkansas River					
Bigelow Divide	1/29	31	5.7	3.1	4.9
Brumley	Discontinued				
Cooper Hill (B)	1/30	39	9.3	10.6	6.9
East Fork	1/29	33	7.7	8.6	6.1
Four Mile Park	1/30	32	7.1	4.6	3.9
Fremont Pass	1/29	41	10.8	15.3	9.6
Garfield	1/31	48	13.7	10.2	8.6
Hermit Lake	1/26	50	13.4	5.4	6.4
Monarch Pass	1/31	58	16.6	14.3	10.1
South Colony	1/29	86	27.4	--	--
Tennessee Pass	1/29	40	9.0	9.2	6.3
Twin Lakes Tunnel	1/31	42	11.7	10.0	5.5
Westcliffe	1/29	42	10.9	3.7	5.4
Cucharas River					
Apishapa	1/29	23	6.0	4.2	5.0
Cucharas Creek	1/29	30	6.6	4.4	--
La Veta Pass (B)	1/31	47	10.3	4.4	5.9
Purgatoire River					
Bourbon	1/30	30	5.3	3.5	4.9
Whiskey Creek	1/30	38	7.8	--	--

NS-No survey.  
(B)-On adjacent drainage.

WATERSHED SNOWPACK



RIO GRANDE WATERSHED IN COLORADO AND NEW MEXICO



LEGEND

- Highway
- Drainage
- Town
- Watershed Boundary
- Generally Adequate 100% or more
- Limited Storage 75% to 100%
- Severe Shortage 75% or less

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

Basin or Stream and or RESERVOIR	Usable Capacity	This Year	Last Year	1963-77 Average
COLORADO				
Continental	27	6	4	4
Platoro	75	14	13	9
Rio Grande	46	10	5	16
Sanchez	103	6	4	10
Santa Maria	45	6	4	6
Terrace	18	1	--	6
NEW MEXICO				
Avalon	5	5	2	3
Caballo	344	45	19	47
Conchas	273	91	107	134
El Vado	195	52	27	31
Elephant Butte	2195	52	215	405
McMillan	34	20	8	15
Sumner	111	27	42	59

WATER SUPPLY OUTLOOK

STREAM or AREA	Spring Season	Little Season
COLORADO		
Saguache Creek	Exc.	Exc.
Sangre de Cristo Cr.	Exc.	Exc.
Trinchera Creek	Exc.	Exc.
NEW MEXICO		
Embudo Creek	Exc.	Exc.
Mora River	Exc.	Exc.
Nambe Creek	Exc.	Exc.
Rio Ojo Caliente	Exc.	Exc.
Rio Pueblo de Taos	Exc.	Exc.
Santa Fe Creek	Exc.	Exc.

SUMMARY of SNOW MEASUREMENTS

RIVER BASIN and or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	1963-77 Average
COLORADO			
Alamosa	1	253	208
Conejos	3	240	218
Culebra	2	230	198
Rio Grande, CO	12	308	234

SNOW COURSE MEASUREMENTS

SNOW COURSE	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (INCHES) LAST YEAR	WATER CONTENT (INCHES) AVG. 1963-77
RIO GRANDE BASIN-COLO.					
Alamosa River					
Silver Lakes	1/29	38	8.1	3.2	3.9
Conejos River					
Cumbres Pass	1/28	99	29.8	12.1	13.1
Cumbres Trestle	1/28	105	29.5	12.9	14.3
La Manga	1/28	86	25.2	10.0	11.1
Platoro	NS	--	--	8.6	11.2
River Springs	Not Scheduled			--	4.5
Culebra River					
Brown Cabin				3.4	4.6
Cottonwood (B)				3.5	4.4
Culebra	1/29	50	12.9	5.7	5.8
La Veta Pass (B)	1/31	47	10.3	4.4	5.9
Trinchera (B)					
Rio Grande					
Bristol Head					
Cochetopa Pass	1/26	32	7.3	4.2	3.6
Grayback	1/31	68	20.8	6.9	9.1
Hiway	1/29	114	34.4	10.8	15.6
Lake Humphrey	1/26	57	14.3	2.4	4.7
Love Lake	1/30	60	16.9	4.4	5.2
Middle Creek	1/30	94	31.3	--	--
Pass Creek	1/30	73	21.2	4.8	8.7
Piedra Peak	Discontinued			--	--
Pool Table	1/31	43	10.4	2.4	4.1
Porcupine	1/28	61	16.2	6.2	6.9
Santa Maria	1/28	43	10.7	4.4	3.3
Upper Rio Grande	1/28	56	14.9	4.9	5.6
Wolf Creek Pass	1/30	114	36.1	14.2	17.9
Wolf Cr. Summit (B)	1/30	124	38.5	13.0	18.5

NS-No survey.  
(B)-On adjacent drainage.

YOUR WATER SUPPLY

A RECORD SNOWPACK IN THE MOUNTAINS GUARANTEES AN EXCELLENT WATER SUPPLY FOR THE COMING SEASON. A SUCCESSION OF STORMS DURING JANUARY BOOSTED THE SNOWPACK TO OVER 200 PERCENT OF NORMAL AND IN SOME CASES TO AS MUCH AS 300 PERCENT OF NORMAL FOR THIS TIME OF YEAR. ALL STREAMS IN COLORADO ARE EXPECTED TO FLOW 75 TO 80 PERCENT ABOVE AVERAGE. THIS SHOULD BE ESPECIALLY WELCOME NEWS AFTER THE EFFECTS OF THE PREVIOUS SEVERAL YEARS OF DROUGHT CONDITIONS. RESERVOIR STORAGE IN COLORADO RESERVOIRS IS SLIGHTLY BELOW NORMAL BUT SHOULD HAVE NO TROUBLE FILLING. SOIL MOISTURE IS RATED AS GOOD. IN NEW MEXICO ALL STREAMS ARE PREDICTED TO FLOW BETWEEN 175 AND 200 PERCENT OF NORMAL AS A RESULT OF THE ABNORMALLY HEAVY PRECIPITATION TO DATE. MAJOR RESERVOIRS, CURRENTLY BELOW NORMAL, SHOULD RECOVER SUBSTANTIALLY.

STREAMFLOW FORECASTS (1000 Ac. Ft.)

FORECAST POINT	Forecast	% of Average	1963-77 Average
COLORADO (April-September)			
Alamosa Creek above Terrace Reservoir	111	175	63.6
Conejos River near Mogote (1)	311	170	183.0
Culebra Creek at San Luis (2)	28	180	15.3
Rio Grande at 30 Mile Bridge (3)	215	180	119.0
Rio Grande near Del Norte (3)	832	180	462.0
South Fork of Rio Grande at South Fork	208	175	119.0
NEW MEXICO (March-July)			
Costilla Creek at Costilla (4)	30	195	15.4
Jemez River near Jemez	62	186	33.3
Pecos River at Pecos	76	200	38.1
Red River at Mouth near Questa	50	184	27.2
Rio Chama at El Vado	336	190	177.0
Rio Grande at Otowi (5)	920	185	497.0
Rio Grande at San Marcial (5)	635	190	335.0
Rio Hondo near Valdez	24	190	12.8
Santa Cruz River at Cundiyo	21	185	11.6

(1) Observed flow plus change in storage in Pecos Reservoir. (2) Observed flow plus change in storage in Conejos Reservoir. (3) Observed flow plus change in storage in Santa Maria, Rio Grande and Continental Reservoirs. (4) Observed flow plus change in storage in San Marcial Reservoir. (5) Observed flow plus change in storage in Rio Hondo and Rio Grande Reservoirs.

SUMMARY of SNOW MEASUREMENTS

RIVER BASIN and or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	1963-77 Average
NEW MEXICO			
Pecos	1	331	319
Red River	2	303	241
Rio Chama	3	206	213
Rio Grande, NM	13	252	202
Rio Hondo	1	240	--

SNOW COURSE MEASUREMENTS

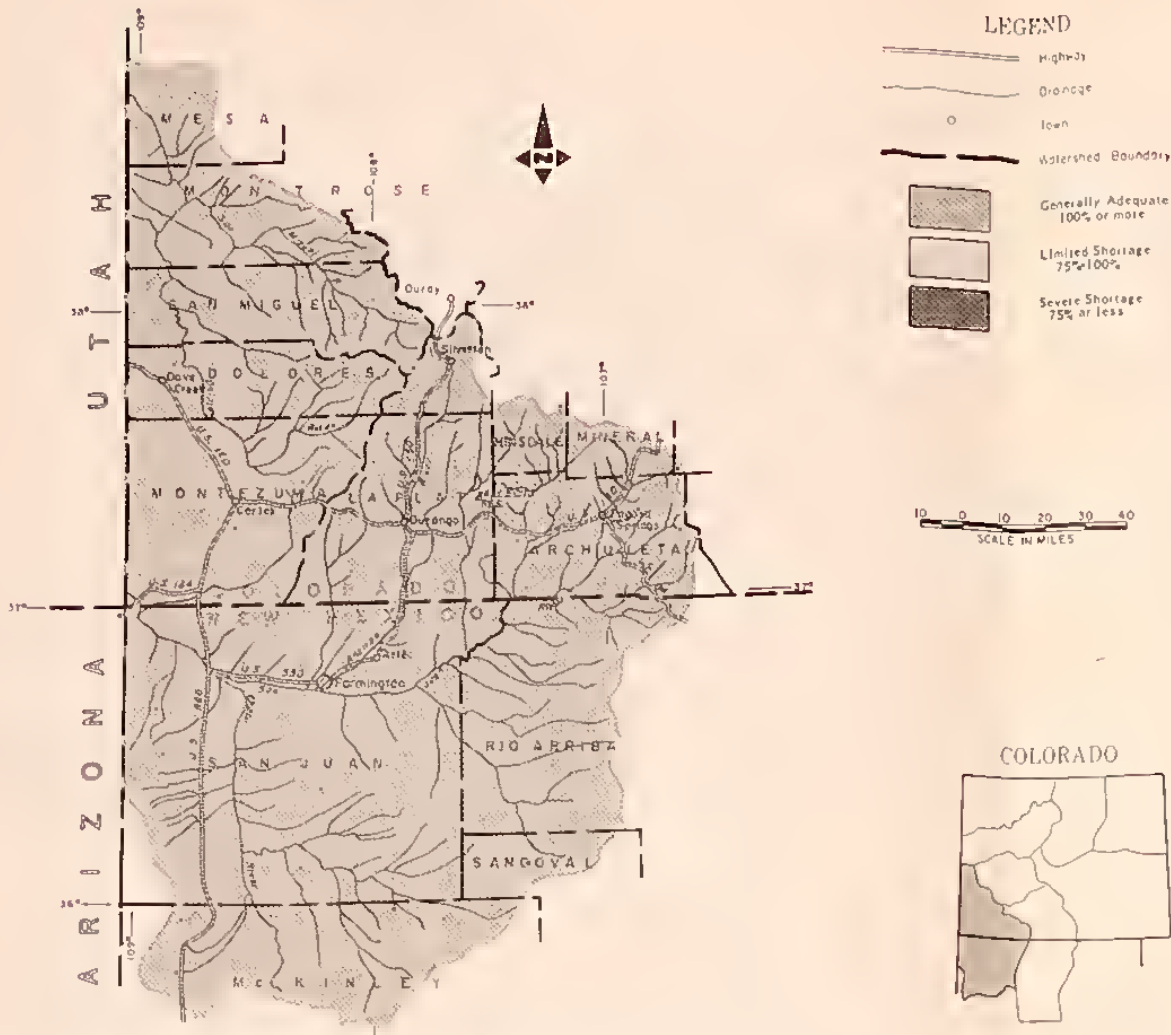
SNOW COURSE	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (INCHES) LAST YEAR	WATER CONTENT (INCHES) AVG. 1963-77
RIO GRANDE BASIN - NM					
Pecos River					
Panchuelo	1/31	39	8.6	2.6	2.7
Red River					
Hematite Park (B)	1/31	37	8.0	2.0	2.8
Red River	1/31	40	9.6	3.8	4.5
Rio Chama					
Bateman	1/30	56	13.6	7.3	6.5
Chama Divide	1/28	33	7.0	3.0	2.8
Chamita	1/28	49	11.4	5.2	5.7
Rio Grande					
Alamitos	1/30	35	7.3	3.0	3.3
Bernal Trail (B)	NS	--	--	--	--
Big Tesuque	1/25	33	8.5	2.7	4.0
Cordova	Not Scheduled			--	--
Elk Cabin	1/29	26	5.0	1.5	2.7
Gallegos Peak	1/29	46	7.5	5.3	--
Hopewell	1/28	68	18.8	9.6	9.6
La Cueva	1/25	37	8.2	3.5	4.4
North Costilla	1/29	34	6.4	3.4	--
Palo	1/31	34	7.1	3.7	5.5
Payrole	1/30	48	11.4	5.2	5.3
Quemazon	1/30	54	13.2	3.7	5.1
Rio En Medio	1/25	45	11.5	5.8	5.9
Sandoval	1/25	32	8.2	1.9	3.2
Senorita Divide	1/30	47	10.7	4.3	5.5
Taos Canyon	1/31	27	6.8	2.0	3.2
Tres Ritos	1/30	25	7.2	2.3	3.5
Rio Hondo					
Taos Powderhorn	2/01	107	30.3	12.6	--

NS-No survey.  
(B)-On adjacent drainage.





SAN MIGUEL, DOLORES, ANIMAS AND SAN JUAN WATERSHEDS IN COLORADO AND NEW MEXICO



SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Asfigured	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	1963-77 Average
Animas	8	201	198
Dolores	5	137	228
San Juan	5	253	210

SNOW COURSE MEASUREMENTS

SNOW COURSE	CURRENT INFORMATION			PAST RECORD	
	DATE OF SURVEY	SNOW DEPTH (INCHES)	WATER CONTENT (INCHES)	WATER CONTENT (INCHES)	
				LAST YEAR	AVG. 63-77
SAN JUAN-DOLORES BASIN					
<u>Animas River</u>					
Cascade	1/29	72	19.6	9.6	8.6
Lemon	1/31	64	17.3	6.2	6.3
Mineral Creek	1/29	65	18.9	11.8	9.9
Molas Lake	1/30	61	17.9	11.2	9.0
Purgatory	1/30	98	31.8	13.1	13.9
Red Mt. Pass (B)	1/29	97	29.5	23.0	18.9
Silverton Sub-Sta.	1/29	47	12.6	7.5	6.2
Spud Mountain	1/30	102	27.1	15.8	15.5
<u>Dolores River</u>					
Lizard Head	1/24	66	18.3	12.6	10.8
Lone Cone	1/30	64	18.6	11.8	11.2
Ophir Loop	1/30	62	17.4	13.0	--
Rico	1/26	44	9.6	6.2	5.8
Snow Spur	1/24	67	17.2	--	--
Telluride	1/30	39	9.8	8.2	5.3
Trout Lake	1/30	53	15.1	13.4	9.0
<u>San Juan River</u>					
Chama Divide (B)	1/28	33	7.0	3.0	2.8
Chamita (B)	1/28	49	11.4	5.2	5.7
Upper San Juan	1/29	142	42.2	18.0	19.5
Wolf Cr. Pass (B)	1/30	114	36.1	14.2	17.9
Wolf Cr. Summit	1/30	124	38.5	13.0	18.5

NS-No survey.  
(B)-On adjacent drainage.

YOUR WATER SUPPLY

EXCELLENT WATER SUPPLIES CAN BE EXPECTED IN ALL DRAINAGES AS A RESULT OF THE RECORD SNOWPACK WHICH IS DEVELOPING. ALL SNOW COURSES HAVE ALREADY SURPASSED THEIR APRIL 1 AVERAGE. CASCADE, SILVERTON, AND TELLURIDE SNOW COURSES RECORDED MAXIMUM OF RECORD SINCE THE MID-1930'S. THE LAST YEAR WITH A COMPARABLE SNOW-PACK WAS 1952. ALL RESERVOIRS SHOULD HAVE NO PROBLEM FILLING DURING THIS SPRING'S RUNOFF.

STREAMFLOW FORECASTS (1000 Ac. Ft.) April - September

FORECAST POINT	Forecast	% of Average	1963-77 Average
Animas River at Durango	720	169	425.0
Dolores River at Dolores	163	170	233.0
La Plata River at Hesperus	40	170	23.5
Los Pinos River at Bayfield (1)	345	169	204.0
Mancos River near Towac (2)	35	160	21.9
Inflow to Navajo River (1 & 3)			608.0
Piedra Creek at Arboles			201.0
San Juan River at Carracas	650	176	370.0
San Miguel River at Placerville	200	161	124.0

(1) Observed flow plus change in storage in Vallecito Reservoir. (2) March-July. (3) April-July.

WATER SUPPLY OUTLOOK

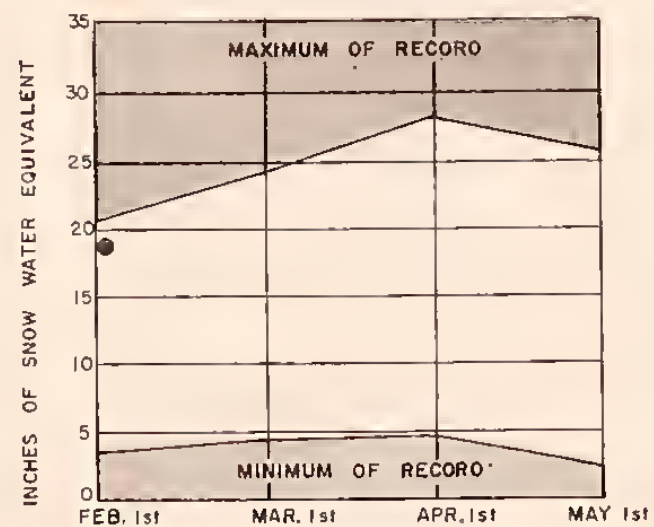
Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Florida River	Exc.	Exc.
Hermosa Creek	Exc.	Exc.
West Dolores River	Exc.	Exc.
Williams Creek	Exc.	Exc.

RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

Basin or Stream and/or RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	1963-77 Average
Groundhog	22	9	7	10
Jackson Gulch	10	2	4	--
Lemon	40	8	5	18
Navajo	1696	1183	956	730
Vallecito	126	37	20	54

WATERSHED SNOWPACK Based on 5 Selected Snow Courses



WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS

-GUNNISON RIVER WATERSHED

Describes water supply conditions in Delta, Gunnison, Cimarron, Shavano, and Uncompahgre Soil Conservation Districts.

-COLORADO RIVER WATERSHED

Describes water supply conditions in DeBeque, Plateau Valley, Lower Grand Valley, Bookcliff, Eagle County, Middle Park, Glade Park, Upper Grand Valley, South Side, and Mt. Sopris Soil Conservation Districts.

-SOUTH PLATTE RIVER WATERSHED

Describes water supply conditions in Fort Collins, Big Thompson, Longmont, Boulder Valley, Jefferson, Teller-Park, Douglas County, Morgan, Kiowa, West Arapahoe, West Adams, East Adams, Platte Valley, Southeast Weld, and West Greeley Soil Conservation Districts. Also describes water supply conditions in Sedgwick, South Platte, Haxton, Peetz, Padroni, Morgan, Rock Creek, and Yuma Soil Conservation Districts.

-YAMPA, WHITE AND NORTH PLATTE RIVERS WATERSHED

Describes water supply conditions in Yampa, Moffat, West Routt, East Routt, North Park, White River, and Douglas Creek Soil Conservation Districts.

-ARKANSAS RIVER WATERSHED

Describes water supply conditions in Lake County, Upper Arkansas, Fremont, Custer County Divide, Fountain Valley, Black Squirrel, Central Colorado, Turkey Creek, Pueblo, Bessemer, Olney Boone, Cheyenne, Upper Huerfano, Stonewall, Spanish Peaks, Purgatoire, Branson Trinchera, Western Baco, Southeastern Baco, Two Buttes, Bent, Timpos, Northeast Prowers, Prowers, Kiowa County, West Otero, East Otero, Prairie, Hi Plains, and Double El Soil Conservation Districts.

-RIO GRANDE WATERSHED

Describes water supply conditions in Rio Grande, Center, Conejos, Masco Hooper, Mt. Blanco, Sanchez, and Culebra Soil Conservation Districts. Also describes water supply conditions in Upper Chamo, East Rio Arriba, Toas, Lindrih, Jemez, Santa Fe - Pojoaque, Sandoval, Tijeras, Cuba, and Edgewood Soil Conservation Districts.

-DOLORES, SAN JUAN, AND ANIMAS RIVERS WATERSHED

Describes water supply conditions in San Miguel Basin, Dove Creek, Dolores, Mancos, LaPlata, Pine River, San Juan, San Miguel Basin, and Glade Park Soil Conservation Districts.